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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,284	01/17/2002	David A. Potts	2104	4880

28152 7590 08/18/2003

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EXAMINER

PRINCE, FRED G

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/053,284

Applicant(s)

POTTS, DAVID A.

Examiner

Fred Prince

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-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-26, 28, 30 and 31 is/are rejected.
- 7) ☒ Claim(s) 16, 27 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities:

On page 9, a patent application is referred to by "Atty. No.". Applicant is required to provided the serial no., filing date, and, if it has become a patent, the patent no.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 28 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 28 recites the limitation "the leach field" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 5, 8-12, 19-26, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Basile et al.

Basile et al., directed toward a method and apparatus for treating water in soil, teach flowing waste water into a conduit (col. 9, lines 22-26), then to an influence zone (Fig. 1), wherein the biochemistry of the wastewater is altered (abstract), including delivering heat to the zone by flowing air through a blower then through a heating element comprising a conduit in order to heat the soil (col. 10, lines 34-48).

7. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Benson.

Benson, directed toward a leach field, teaches delivering heat to an influence zone to heat the soil (col. 3, lines 60-62; col. 4, line 22).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4, 6-7, 13, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basile et al.

Basile et al. is described above. Basile et al. do not disclose the specified temperatures for the air and soil or measuring the temperature of the soil, applying a suitable amount of heat, or using a heat pump.

Per claims 4, 6-7, and 13, it is well within the purview of the skilled artisan to have used the specified temperatures in order to create temperatures conducive to bacterial degradation of contaminants and to measure the temperature of the soil and

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apply an appropriate amount of heat in order to avoid overheating or underheating a material. Accordingly, it would have been obvious to the skilled artisan to have modified the method of Basile et al. such that the recited temperatures are used and created in order to degrade contaminants and to measure the temperature of the soil and apply an appropriate amount of heat in order to avoid overheating or underheating the soil, absent a proper showing of unexpected results.

Per claim 30, it is submitted that it is conventional in the art of air heating to use a heat pump heat in order to inexpensively heat air. Accordingly, it would have been obvious for the skilled artisan to have modified the apparatus of Basile et al. such that it includes a heat pump in order to inexpensively heat the air.

10. Claims 14-15 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Basile et al. in view of Aines et al.

Basile et al. is described above. Basile et al. do not disclose insulating the soil above conduits.

Aines et al. disclose insulating (14) the soil above conduits in order to control the temperature of the soil (col. 3, lines 47-60).

It would have been obvious for the skilled artisan to have modified the method of Basile et al. such that it includes insulating the soil above conduits in order to control the temperature of the soil, as suggested by Aines et al.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Benson in view of Potts.

Benson, is described above. Benson also discloses flowing heated air. Benson does not disclose stopping the flow of wastewater, prior to heating and flowing, then resuming flow of wastewater.

Potts discloses stopping the flow of wastewater during a renovation step and then resuming the flow of wastewater in order to better treat wastewater that enters the system after aeration (col. 10, lines 42-45).

It would have been obvious for the skilled artisan to have modified the method of Benson such that it includes stopping the flow of wastewater during a renovation step and then resuming the flow of wastewater in order to better treat wastewater that enters the system after aeration, as suggested by Potts.

***Allowable Subject Matter***

12. Claims 16, 27, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter:

Per claims 16 and 29, while claims 1 and 28 are not patentable for the reasons provided above, in the examiner's opinion, the prior art fails to teach or fairly suggest the elements of claim 1 or 28 in combination with transferring heat from a geothermal

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heat source or water within the earth underlying the soil. The instant invention provides the advantage of utilizing a local source that does not require additional heating.

Per claim 27, in the examiner's opinion the prior art fails to teach or fairly suggest the combination of claim 25 and a blower that creates enough heat from its operation to heat atmospheric air. The instant invention provides the advantage of utilizing heated air which does not require a separate, dedicated heater or heat exchanger.

### ***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References are cited of interest to show the state of the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Prince whose telephone number is (703) 306-9169. The examiner can normally be reached on Monday-Thursday, 6:30-4:00; alt. Fridays 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine R. Copenheaver can be reached on (703) 308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

*Fred G. Prince*  
**FRED G. PRINCE**  
**PRIMARY EXAMINER**

August 8, 2003